

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A separator for electrochemical cells comprising a porous carrier which comprises woven or non-woven polymeric fibers having on and in this carrier a porous inorganic nonelectroconductive coating comprising particles having an average particle size in the range from 0.5 to 10 μm which are adhered to each other and to the carrier by an inorganic adhesive,

~~characterized in that~~ wherein

the inorganic coating comprises from 75 to 99 parts by mass of one or more oxidic particles of the elements Al, Si and/or Zr having an average particle size in the range from 0.5 to 10 μm and from 1 to 25 parts by mass of particles having an average particle size in the range from 0.5 to 10 μm of at least one zeolite.

Claim 2 (Currently Amended): ~~A separator as per~~ The separator of claim 1,

~~characterized in that~~ wherein

the zeolites in the zeolite particles are in the Na^+ or Li^+ form.

Claim 3 (Currently Amended): ~~[[A]] The separator as per of claim 1 or 2,~~

~~characterized in that~~ wherein

the carrier is flexible and less than 50 μm in thickness.

Claim 4 (Currently Amended): ~~-[[A]] The separator according to claim 3,~~

~~characterized in that~~ wherein

the carrier is polymeric nonwoven fibers.

Claim 5 (Currently Amended): ~~[[A]] The separator according to at least one of claims~~
~~claim 1 to 4,~~

~~characterized in that wherein~~

the polymeric fibers of the carrier are ~~selected from~~ fibers selected from the group
consisting of polyacrylonitrile, polyamide, polyester, and/or polyolefin, and combinations
thereof.

Claim 6 (Currently Amended): ~~[[A]] The separator according to at least one of claims~~
~~claim 1 to 5,~~

~~characterized in that wherein~~

the inorganic adhesives are selected from oxides of the elements Al, Si and/or Zr.

Claim 7 (Currently Amended): ~~[[A]] The separator as per at least one of claims claim 1~~
~~to 6,~~

~~characterized in that wherein~~

the inorganic adhesive comprises particles having an average particle size of less than
20 nm and ~~[[was]] is~~ prepared ~~[[via]] by~~ a particulate sol or comprises an inorganic network of
oxides ~~which was~~ prepared ~~[[via]] by~~ a polymeric sol.

Claim 8 (Currently Amended): ~~[[A]] The separator as per at least one of claims claim 1~~
~~to 7,~~

~~characterized in that which~~ ~~[[it]]~~ further comprises an inorganic network comprising
silicon, the silicon of the network being bonded ~~[[via]] by~~ oxygen atoms to the oxides of the
inorganic coating and ~~[[via]] by~~ an organic radical to the carrier which comprises polymeric
fibers.

Claim 9 (Currently Amended): ~~[[A]] The separator as per at least one of claims claim 1 to 8,~~

~~characterized in that wherein~~

the zeolite particles present are particles selected from the zeolites Zeolite-A, Zeolite-Y, Zeolite-USY, ZSM-5 or ZSM-9.

Claim 10 (Currently Amended): ~~[[A]] The process for producing a separator as per at least one of claims claim 1 to 9,~~

~~characterized in that comprises comprising steps of~~

coating a carrier which comprises woven or non-woven polymeric fibers ~~being provided~~ with a ceramic coating applied by a suspension ~~being applied~~ onto and into the carrier and ~~being solidified~~

heating and solidifying the suspension on and in the carrier ~~by at least single heating~~, the suspension comprising a sol and at least two fractions of particles of which the first fraction comprises oxidic particles having an average particle size in the range from 0.5 to 10 μm selected from the oxides of the elements Al, Zr and/or Si and comprises from 75 to 99 parts by mass and of which the second fraction comprises zeolite particles having an average particle size in the range from 0.5 to 10 μm and comprises from 1 to 25 parts by mass.

Claim 11 (Original): ~~[[A]] The process according to claim 10,~~

~~characterized in that further comprising the step of~~

adding an adhesion promoter selected from the organofunctional silanes ~~is added~~ to the suspension before it is applied to the carrier.

Claim 12 (Currently Amended): ~~[[A]]~~ The process according to claim 11,

~~Characterized in that wherein~~

the adhesion promoter ~~has been~~ is selected from the group consisting of 3-aminopropyltriethoxysilane, 2-aminoethyl-3-aminopropyltrimethoxysilane, 3-glycidyloxytrimethoxysilane, 3-methacryloyloxypropyltrimethoxysilane, vinyltriethoxysilane, vinyltrimethoxysilane and vinyltris(2-methoxyethoxy)silane.

Claim 13 (Currently Amended): ~~[[A]]~~ The process according to ~~at least one of claims~~
claim 10 to 12,

~~characterized in that wherein~~

the suspension is applied onto and into the carrier by printing on, pressing on, pressing in, rolling on, knife coating on, spread coating on, dipping, spraying or pouring on.

Claim 14 (Currently Amended): ~~[[A]]~~ The process according to ~~at least one of claims~~
claim 10 to 13,

~~characterized in that wherein~~

the carrier ~~used is a~~ comprises a polymeric nonwoven ~~which comprises fibers~~ fiber selected from the group consisting of polyacrylonitrile, polyester, polyamide, ~~and/or~~ polyolefin, and combinations thereof.

Claim 15 (Currently Amended): ~~[[A]]~~ The process according to ~~at least one of claims~~
claim 10 to 14,

~~characterized in that wherein~~

the suspension comprises at least one sol of a compound of the elements Al, Si, or Zr and is prepared by suspending the particles in at least one of these sols.

Claim 16 (Currently Amended): ~~[[A]]~~ The process according to claim 15,
~~characterized in that wherein~~

the sols are obtained by hydrolyzing a precursor compound of the elements Al, Zr or Si with water or with a water-diluted acid.

Claim 17 (Currently Amended): ~~[[A]]~~ The process according to claim 15,
~~characterized in that wherein~~

the suspension comprises a polymeric sol of a compound of silicon.

Claim 18 (Currently Amended): ~~[[A]]~~ The process according to claim 16 ~~or 17~~,
~~characterized in that wherein~~

the sols are obtained by hydrolyzing a compound of the elements Al, Zr or Si with water or an acid or a combination thereof, the compounds being present dissolved in an anhydrous solvent and being hydrolyzed with from 0.1 to 100 times the molar ratio of water.

Claim 19 (Currently Amended): ~~[[A]]~~ The process according to ~~at least one of claims~~
~~claim~~ 10 ~~to 18~~,

~~characterized in that comprising~~

heating and solidifying the suspension present on and in the carrier ~~is solidified by~~
~~heating~~ at from 50 to 350°C.

Claim 20 (Currently Amended): ~~[[A]]~~ The process according to claim 19,
~~characterized in that comprising~~

heating the suspension at a ~~on a polymeric nonwoven comprising polyester fibers the~~
~~suspension is heated at a~~ temperature in the range from 200 to 220°C for from 0.5 to 10
minutes on a polymeric nonwoven comprising polyester fibers.

Claim 21 (Currently Amended): [[A]] The process according to claim 19,
~~characterized in that comprising~~
~~on a polymeric nonwoven comprising polyamide fibers~~ heating the suspension is heated
at a temperature in the range from 130 to 180°C for from 0.5 to 10 minutes on nonwoven
polyamide fibers.

Claim 22 (Currently Amended): The ~~use of a method of using the~~ separator as ~~per at least~~
~~one of claims claim 1 to 9~~ as a separator in ~~batteries a~~ battery.

Claim 23 (Currently Amended): A lithium battery comprising a separator as ~~per at least~~
~~one of claims claim 1 to 9~~.